

TORREYA

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JANE COLDEN, AN EARLY NEW YORK BOTANIST

BY ANNA MURRAY VAIL

A few years ago Mr. James Britten published in the *Journal of Botany* (33: 12. 1895) a sketch of the life of Miss Jane Colden, with a description of her MS. Flora of New York, which is preserved in the Department of Botany of the British Museum. This sketch was compiled from the numerous, but all too fragmentary, references to Miss Colden that are scattered through her father's correspondence and elsewhere in biographies of the period, and is most entertaining reading.

It is with the object of adding a few more facts to those collected by Mr. Britten, as well as to make known something about the first botanist of her sex in the state, that these notes are offered to the Club.

Jane, the second daughter of Lieutenant-Governor Cadwallader Colden, was born in New York, March 27th, 1724. Her father was the son of the Rev. Alexander Colden, minister of Dunse, in the Merse Berwickshire, Scotland. He received his education at the University of Edinburgh, with a view to entering the Church of Scotland, but, his tastes turning in other directions, he devoted himself to the study of medicine. Owing to limited means, his father was unable to assist him in starting a career at home, so he came to this country in 1710 to try his fortune in America, as he himself puts it in a letter to Kalm. Here he settled in Philadelphia, residing with a widowed sister of his mother's, who had established herself there, and began the practice of his profession. That his affairs did not prosper to his satisfaction or that he had a taste for adventure is evinced by the fact that we hear of him as trading in the colonies and in the West Indies.

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In 1715 he returned to England and "in pursuance of the main object, probably, of his visit to his native land," he went to Scotland, where, in November of the same year, he married Alice Christy. The following year saw them both in Philadelphia, and in 1718, accepting the offer from Governor Hunter of a position as master in chancery and surveyor-general, Dr. Colden fixed his residence in New York.

In 1719 a patent for 2,000 acres of land situated in Ulster County was issued to him, and shortly after he procured another thousand acres adjoining the first, and to this manor he gave the name of "Coldenham," still known to-day as Coldenham, in the town of Montgomery, Orange County.*

The details of his active life are too well known to be recounted here. Suffice it to say that about this time Governor Hunter offered him a small stipend for the compilation of a list of the plants and animals of New York. This work was to be pursued on his surveys, but, owing to extensive cutting down of expenditures in the province, it was not carried out. As regards the flora of the state as a whole, this was only accomplished nearly a hundred years later with the publication in 1814 by Jacob Green of his "Catalogue of the Plants Indigenous to the State of New York," and later by the more complete and detailed works of John Torrey, published 1840-43.

In 1728 Dr. Colden with his wife and six young children removed to Coldenham, being led thereto among other reasons "to secure in the — then wilderness abode that leisure for philosophical study to which he was so much inclined."

It was during his residence there for more than thirty years that he maintained a most voluminous correspondence with a number of learned men in Europe. In the intervals of political and literary pursuits he devoted himself to the reclamation and cultivation of his estate, and, with his accomplished wife, to the education of their children. It was here that he wrote that first of "local floras" of New York, the "*Plantae Coldenhamiae*," eventually published by Linnaeus, with whom he had been in

*Purple, E. R. Genealogical Notes of the Colden Family in America. New York; privately printed, 1873.



Pedwallader Foldsen

[From the Historical Magazine, volume 9, January, 1865.]

correspondence, in the "Acta Societatis Regiae Scientiarum Upsaliensis," in 1749, and here Jane grew up and acquired that taste for natural history of which her father wrote in the oft-quoted letter to Gronovius. The portions of this letter which refer to Jane are here printed as copied from the original draft:*

"TO DR. JOHN FREDERIC GRONOVIVS
 Senateur de la Ville de Leiden.

New York Oct. 1st, 1755.

* * * "I (often) thought that Botany is an amusement which may be made greater to the Ladies who are often at a loss to fill up their time (& that) it could be made agreeable to them (it would prevent their employing so much of their time in trifling amusements as they do). Their natural curiosity & the pleasure they take in the beauty & variety of dress seems to fit them for it (far more than men). The chief reason that few or none of them have hitherto applied themselves to this study I believe is because all the books of any value are wrote in Latin & so filled with technical words that the obtaining the necessary previous knowledge is (attended with) so (much) tiresome and disagreeable that they are discouraged at the first set out & give it over before they can receive any pleasure in the pursuit. P
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"I have a daughter, who has an (natural) inclination to reading & a curiosity for natural philosophy or natural History, & a sufficient capacity for attaining a competent knowledge. I took the pains to explain Linnaeus's System (for her), and to put it in English for her use by freeing it from the Technical terms, which was easily done by using two or three words in place of one. She has now grown very fond of the study, and has made such progress in it that as I believe would please you if you saw her performance, tho' perhaps she could not have been persuaded to learn the terms at first, she now understands in some degree Linnaeus' characters, notwithstanding that she does not understand Latin. She has already a pretty large volume in writing of the Description of plants. She was shown a method of taking the impression of the leaves on paper with printers ink, by a simple kind of rolling press which is of use in distinguishing the spe-

* Colden MSS. in the New York Historical Society. For permission to examine some of these MSS. I am indebted to the librarian of the New York Historical Society.

This letter is somewhat differently printed in "Selections from the Scientific Correspondence of Cadwallader Colden with Gronovius, Linnaeus, Collinson and other Naturalists," *Am. Jour. Sci. and Arts* 44: 133. 1843.

cies by their leaves. No description in words alone can give so clear an idea as when the description is assisted with a picture. She has the impression of 300 plants in the manner you'll see by the sample sent you. That you may have some conception of her manner of describing (of plants) I propose to enclose some (two or three) Samples in her own writing, some of which I think are new genus's. One is of the *Panax folys ternis ternatis* in the Flora Virg. . . . I never had seen the fruit of it till she discover'd it. The fruit is ripe in the beginning of June and the plant dies immediately after the fruit is ripe & no longer to be seen. Two more I have not found described any where and in the others you will find some things particular which I think are not taken notice of by any Author I have seen. If you think Sr that She can be of any use to you She will be extremely pleased in being employed by you either in sending Descriptions for any Seeds you shall desire or dried specimens of any particular plants that you shall mention to me. She has time to apply herself to gratify your curiosity more than I ever had and now when I have time the infirmities of age disable me."

Mr. Britten describes the "pretty large volume in writing" as follows:

"The 'pretty large volume in writing' is now in the Department of Botany in the British Museum. After the writer's death it passed into the hands of F. von Wangenheim, then into those of Godfrey Baldinger, and finally became the property of Banks. An account of the MS. is prefixed by Wangenheim, and a title-page was added by Baldinger, of which the following is a transcript:

FLORA
NOV.-EBORACENSIS.

Plantas in Solo Natali
collegit, descripsit,
delineavit,
COLDENIA,
CADWALLADER COLDENS
Filia.

Divitiis Bibliothecae
Josephi Banks
adiecit

Ern. Godofr. Baldinger,
 olim in Aca. Jememsi Prof. Bot.
 et Med. Theoret. ; in Acad. Goettingensi
 Med. Pract. ; in Academia Marburgensi
 Ord. Medicor. Prof. Primarius.

Anno 1801

“The prefatory note by Wangenheim is published in the account of the MS. given in Schrader’s *Journal für die Botanik* for 1800 (Göttingen, 1801) p. 468. The following is a translation :

‘This MS., which has never been printed, contains a part of the New York Flora, and has been composed by a lady, the daughter of Governor Cadwallader Colden, well known for his botanical works, and also a physician. This lady married a doctor of medicine, Farquer (Farquhar), a Scotchman by birth, and she died soon afterwards. Some of the names are according to her father and according to Gronovius, and some are according to the Brandenburg doctor Schoepff, who has read this work. The trivial names are according to Linnaeus.

‘This work is a remarkable one because it is that of a lady who possessed such a love for botany that she learned Latin, and judging by its nature is so worthy and correct that it contains many even minute things.

‘This is written by F. von Wangenheim,
 Captain in the Field-Jäger Corps of the Landgrave of Hesse
 New York, May, 1782.’

“It will be observed that this narrative contradicts Gray’s statement that Jane Colden died unmarried : Pritzel accepts Schrader’s account but adds, ‘Moriens (1754) Floram manuscriptam Novi Eboraci tabulis ornata reliquit Wangenheimio.’ If the MS. was bequeathed to Wangenheim, it is strange that he did not say so : the date given for her death is certainly inaccurate. Wangenheim’s statement that she ‘learned Latin’ is contrary to her father’s account, but probably only means that she acquired the Latin names of the plants she described ; the descriptions in the MS. (to which she gave no title) are all in English.

“The actual number of figures is 340 : the numbers of the descriptions run to 341, but these are really less numerous, as a good many pages are blank, save for the name of the plant at their head. This suggests that the figures were made before the

descriptions ; they are very poor and consist only of leaves.* The descriptions, on the other hand, are excellent — full, careful, and evidently taken from the living specimens. One of these has been published in full (No. 153 of the MS.) in *Essays and Observations*, vol. ii. (Edinburgh, 1770). The plant (*Hypericum virginicum*) to which it refers had been sent her by Alexander Garden, who found it at New York in 1754 ; in return, Miss Colden sent him the description of the same plant, which she had discovered during the previous summer, and, ‘ using the privilege of a first discoverer, she was pleased to call this new plant *Gardenia*, in compliment to Dr. Garden.’ Another of her descriptions, translated into Latin, was sent by Ellis to Linnaeus in 1758, and is published in the *Correspondence of Linnaeus* i. 94. The plant to which it referred was retained by Linnaeus in *Helleborus*, but separated by Salisbury (who has been followed by subsequent botanists) under the name of *Coptis*. Miss Colden (No. 292) called it *Fibraurea*, a translation of the popular name ‘ Gold Thread.’ Ellis, forwarding the description, says : ‘ This young lady merits your esteem, and does honour to your System. She has drawn and described 400 plants in your method only : she uses English terms. Her father has a plant called after him *Coldenia*, suppose you should call this *Coldenella*, or any other name that might distinguish her among your Genera.’ Unfortunately, Linnaeus did not recognize the genus as distinct, so neither of these names was adopted.”

“ Little indications in the descriptions show that Miss Colden went among the country folk and noted their names and rustic remedies. Thus of *Pedicularis tuberosa* (No. 41) she says : ‘ The *Pedicularis* is called by the country people *Betony* : They make Thee of the Leaves, and use it for the Fever and Ague.’ *Asclepias tuberosa* is ‘ an excellent cure for the Colick. This was learn’d from a Canada Indian, and is called in New England Canada Root. The Excellency of this Root for the Colick is confirm’d by Dr. Pater of New England, and Dr. Brooks of

* The figures are merely ink outlines washed in with neutral ink, not the ‘ nature printed ’ ones mentioned in Colden’s letter, of which, however, there is one example at the end of the book.

Maryland likewise confirmed this.' The root of *Solidago canadensis* 'is used in Carolina for the cure of the Negro Poison'; *Oenothera biennis* is 'call'd here by the Country People, Sea-bedge'; *Malva caroliniana* is 'called in South Carolina, Bohea Tea:' and *Gillenia trifoliata* is 'call'd here, Ipecacuanha.' Occasionally a note shows particular observations, such as this on *Clematis virginiana*: 'Neither Linnaeus take notice (*sic*) that there are some Plants of the Clematis that bear only Male flowers, but this I have observed with such care, that there can be no doubt of it.'"

Numerous references to her in Darlington's* Memorials of John Bartram and Humphry Marshall, Smith's† Correspondence of Linnaeus and elsewhere in contemporaneous records and biographies, evince the fact that she had become well known to her father's friends and that her botanical accomplishments were appreciated and her services in the matter of the collection of seeds and plants often taken advantage of.

Peter Kalm on the 29th September, 1748, sends his respects to Mistress Colden, the Misses and young Master Colden.

In a letter from John Bartram‡ to Peter Collinson dated 1753, he describes a journey to the "Katskill Mountains" with his son "Billy" and writes of a visit to Coldenham in the following words:

"At night, we lodged seven or eight of us (they being two families) in the hut, hardly big enough for a hen-roost—I and Billy on the ground—after a piece of a musty supper. Slept but little in this lousy hut, which we left, as soon as we could well see our path, in the morning, having paid him half a crown, which he charged, and reached Dr. Colden's by noon. Got our dinner, and set out to gather seeds, and did not get back till two hours within night; then looked over some of the Doctor's daughter's botanical, curious observations. Next morning, as soon as I could see, we hunted plants till breakfast: then the Doctor's son went with me to Doctor Jones's, where we observed the Pines, on a high hill near the Doctor's. After dinner, we went to the river to gather *Arbor Vitae* seeds: then returned to Dr. Colden's by two hours within night. In the morning gathered seeds till break-

* Darlington, W. Memorials of John Bartram and Humphry Marshall. Philadelphia. 1849.

† Smith, E. Selection of the Correspondence of Linnaeus. London. 1821.

‡ Darlington. Memorials, 195.

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fast. These two days I could have refreshed myself finely, if the Doctor had been at home, or durst have eaten freely of what was set before me : for they all were very kind."

Further on in a letter from Peter Collinson to John Bartram dated January, 1756, he expresses himself in regard to Miss Colden's accomplishments in the following terms :

"Our friend Colden's* daughter has, in a scientific manner sent over several sheets of plants, very curiously anatomized after his † method. I believe she is the first lady that has attempted anything of this nature. They are to be sent to Dr. Gronovius ; and he, poor man ! I believe is in a bad state of health ; for I cannot get a line from him (who used to be very punctual), if he has received Billy's fine drawings of Oaks, and thy system. Though I have writ several letters, I shall this day send another."

But the most interesting of all is the letter from John Bartram to Miss Jane Colden dated January 24th, 1757, that begins :

JOHN BARTRAM TO MISS JANE COLDEN. ‡

"January the 24th, 1757.

"RESPECTED FRIEND JANE COLDEN :

"I received thine of October 26th, 1756, and read it several times with agreeable satisfaction : indeed, I am very careful of it, and it keeps company with the choicest correspondence, — European letters.

"The Viney plant thee so well describes, I take to be the *Dioscorea* of Hill and Gronovius ; though I never searched the characters of the flower so curiously as I find thee hath done ; but pray search them books, thee may presently find that article.

"I shall be extremely glad to see thee once at my house, and to show thee my garden. My Billy is gone from me to learn to be a merchant, in Philadelphia, and I hope a choice good place, too (Captain Childs). I showed him thy letter, and he was so well pleased with it, that he presently made a packet of very fine drawings for thee, far beyond Catesby's, took them to town, and told me he would send them very soon. I was then in a poor state of health : but am now well recovered. We very gratefully receive thy kind remembrance, and my two dear friends, thy father and mother. I want once more to climb the Katskills ; but I think it is not safe to venture these troublesome times.

"I have had several kinds of the *Cochleata*, or Snail Trefoil, and *Trigonella*, or Fenugreek ; but, being annual plants, they are gone off. The species of *Persicary* thee mentions, is what Tournefort brought from the three churches, at the foot of Mount Ararat.

"The *Amorpha* is a beautiful flower ; but whether won't your cold winters kill it ?

* Darlington. Memorials, 202.

† Linnaeus.

‡ Darlington. Memorials, 400.

“If the Rhubarb from London be the Siberian, I have it. I had the Perennial Flax, from Livonia. It grew four feet high, and I don't know but fifty stalks to the root; but the flax was very rotten and coarse. The flowers are large and blue. It lived many years and then died.

JOHN BARTRAM.

In a letter written to Dr. Colden,* Dr. Alexander Garden of Charleston, S. C., writes in 1754 “I shall be glad to hear of Miss Colden's improvements, which no doubt increase every day, and may we again be surprised with more than a *Dacier*, even in America.”

Dr. Garden's letters, both published and unpublished, contain many allusions to Jane and there were evidently frequent communications that passed between them. In 1755 in a letter to Mr. Ellis † he writes of Dr. Colden as a great botanist and adds with true eighteenth century gallantry that “his lovely daughter is greatly master of the Linnean method.” This last statement in regard to her personal appearance, if she at all resembled her distinguished, but homely father, being more due to the adulatory style of the day than to actual fact, and that Jane's good sense resented an excess of flattery is shown in some later letters.

In an undated and unlabeled fragment addressed presumably to Dr. Colden ‡ he writes :

“I have sent you some of the *Amorpha* a very Curious plant & peculiar to Carolina — in Linnaeus Species Plantar. there is only one Species known but I have (another) which I have brought down from Saluda with me — Miss Colden will be much pleased with it. It flowers with us in Aprile, May & June, & its flowers make a beautiful apearance in a spike. When you favor me with a line please direct to Dr. Alex^d. Garden, Physician in Charlestown, So. Carolina.”

Again in a letter dated Charlestown Febry 18, 1755, he writes :

“I sent you some more of the true Indigo seed and some Millet Seed which I am persuaded will both grow very well to you. I mentioned to Miss Colden that the Small Bags of Shells something like Hops that she has are the real Matrices of the *Buccinum ampullatum* of Dr. Lister — Give me leave to present my Compliments to Miss Colden and your kind family.”

* Gray. Selections.

† Smith. Correspondence of Linnaeus, 348.

‡ Colden MSS.

On May 20th, 1755, he writes :

“It gives me great pleasure that you give me leave to send Miss Colden’s Description of that new plant to any of my Correspondents as I had before sent it to Dr. Whytt at Edinburgh — By your second letter I find I have very innocently offended Both you and Miss Colden by some of the expressions that insensibly dropt from my pen as archetypes of what my heart dictated in warm sincerity. This gives me real concern and give me leave to assure you I shall endeavour as far as in my power to amend anything in my conduct or manner of writing that you are kind enough to point out as wrong. I trust that Both you and your Daughter will forgive me for once. I shall be more sparing in saying what y. think is due to such merit in the future. The Expression which you say gave her most offence, gives me now a great deal of uneasiness as I suspect it has deprived me of the pleasure of a letter from her by last opportunity — It is now past the season of Seeds but I’ll endeavour to procure Such as Miss Colden may want this year, tho’ my present Business confines me much to Town.— Please offer my compliments to Miss Colden & Family.”

Another letter and one of the last containing references to Miss Colden is the following :

Charlestown, November 27, 1755.

“Sir — Your most obliging fav^r of Octo^r last now lyes before me, which came very safe to hand by Schermerhorn as Did the Papers of seeds which your daughter was kind enough to honour me so by his formal trip. I readily confess my neglect in not writing her in return sooner but an affair of Love quite engrossed my thoughts for a season* — [and he ends a long somewhat fantastic letter with —] offer of a kindest compliment to Miss Colden,” etc.

Miss Colden’s accomplishments were not all, however, of a botanical nature. Her mother, Mrs. Colden, the daughter of a Scotch minister, is said to have been a distinguished woman and fully able to fill the social position and to discharge the many duties that fell to her lot. In addition to the numerous cares that were imposed on the housewife of the period, Mrs. Colden assisted her husband in the administration of his estate and in the copying of his correspondence, and owing to his political duties and consequent lengthy and frequent absence from home, much of the education of their children must have devolved on her. She is said to have taught them habits of “virtue and

* The “affair of love” is doubtless an allusion to his approaching marriage, which occurred in Charleston on Christmas Eve, 1755.

economy" and gave them in her life and character the "brightest of examples," so it can be presumed that her daughters were apt scholars in the accomplishments required of well-bred and trained gentlewomen of the day.

The following reference to Miss Colden was the means of identifying with a fair amount of certainty some unsigned household records of hers that are preserved among her father's scientific papers. *

Walter Rutherford was an ancestor of the well-known New York family of that name. He came to America in 1756, while the French war was in progress, and served as an officer of the Royal Americans. In New York in 1758 he married Catharine, the widow of Elisha Parker and a daughter of James Alexander. About this time he wrote to a friend in Scotland, describing a visit to Albany : †

"At one of our landings we made an excursion to Coldenham, the abode of the venerable Philosopher Colden, as gay and facetious in his conversation as serious and solid in his writings. From the middle of the Woods this family corresponds with all the learned Societies in Europe. Himself on the principles of Matter and Motion, his son on Electricity and Experiments. He has made several useful discoveries and is a tolerable proficient in music. His daughter Jennie is a Florist and Botanist, she has discovered a great number of Plants never before described and has given their Properties and Virtues, many of which are found useful in Medicine, and she draws and colors them with great beauty. Dr. Whyte, of Edinburg, is in the number of her correspondents. N. B. She makes the best cheese I ever ate in America."

With this note in mind it does not seem unreasonable to suppose that the "Memorandum of Cheese made in 1756" is in Jane's writing. This "Memorandum" consists of five sheets of foolscap and is the careful and painstaking record of her year of cheesemaking. The following are the two first receipts :

* Colden MSS.

† Family Records and Events, Compiled chiefly from the original MSS. in the Rutherford Collection. By Livingston Rutherford. Privately printed ; 1894. (Only 150 copies.)

MEMORANDUM OF CHEESE MADE IN 1756.

May

- 25 No 1. To this I had a large Pan of Milk more than the Cheese tray would hold. I had used Rennet that was left since last summer, it was very long of thickening & I was obliged to put a great deal in. I made it according to a receipt I got from Sister Willet.* In scalding the Curd after it was chopped there was a good deal of yellow oyl raised on top of the Whey, as it was on the Curd & and when I drained it the second time it had lost much in Bulk. I can not approve of this method, it lost a good deal of rich whey. I expect it will be strong of the Rennet and not be good.
(It was good except a little too much taste of the Rennet)
- 27 2. To this I had the same quantity of milk as to the former, I put one Spoonfulls of the Rennet in it, it thickened in a very short time. I made it after my Mother's old manner, it was a tender good curd and lost very little rich Whey. When it came out of the press it weighed 25 pounds. The first weighed 20 pounds, the third day after it came out of the press.

Later, in the following November she weighed her cheeses and notes their reduced bulk, and there are also notes as to how they eventually tasted. At the end of the sheets she made a list of her milkings and the sales of her butter, showing that in the year she sold 348 pounds of butter that netted her £12.13.3. She even did not omit the names of the purchasers of her butter, nor the amounts sold each time.

It is impossible not to conjecture as to whether any of these cheeses were those extolled by Walter Rutherford! And it is much to be regretted that the drawings "coloured with great beauty" have all disappeared. They surely cannot have been the figures done in "ink outlines washed in with neutral ink" of the "pretty large volume" so graphically described by Mr. Britten.

Jane Colden † married Dr. William Farquhar, a Scotchman and a widower; their marriage license was dated March 12th, 1759. She died March 10th, 1766; her only child in the same year

* Alice, third daughter of Governor Colden, born September 27, 1725, married Colonel William Willet, she being his second wife. She died in 1762.

† Purple, Colden Family in America, 20.

and her husband in 1787. He is described as "a very worthy good Scotsman" and for some years before the Revolutionary War one of the chief and fashionable practitioners of medicine, "distinguished for his abilities and knowledge" in New York City and vicinity. He was one of the founders of the St. Andrew's Society of the State of New York, formed in 1756 of Scotchmen by birth or descent for social and charitable purposes. He acted as an "assistant" (manager) of the Society in 1756 and as vice-president in 1757.*

After 1759 Jane's name does not appear to be mentioned in her father's correspondence, nor can any reference to her marriage be found there. Her place of burial is unknown.

Governor Colden died on Long Island, September 20, 1776, aged over eighty-eight years, and was buried in the private burying-ground on the Willett farm, "Spring Hill," that he purchased in 1762 and where he spent the last years of his life. This property had been deeded by the governor before his death to his son David, but owing to the latter's loyalty to the Crown it was confiscated in 1779 and passed into other hands. At the present time, Governor Colden's farm lies within the limits of Cedar Grove Cemetery in the Borough of Queens, and the ancient burying-place is still extant. Though fallen into decay, it has not been disturbed and is to be preserved in its present condition. Numerous rough stones, bearing the names of members of the Willett family are dated from 1722 to 1797, and local authorities relate that there is a stone with a Colden name on it there, but owing to the heavy snowdrifts at the time of writing, this could not be verified, and does not agree with descriptions of the spot made in 1873.† Governor Colden's fine old mansion is now the office of the cemetery, and is said to have been but little altered in recent years.

* For some of these details, I am indebted to Mr. George Austin Morrison Jr., Secretary of the Saint Andrew's Society.

† Purple, Genealogical Notes, 9.